CLAIMS

1.   A method of downloading a file, consisting of a set of components, from a Internet server to an Internet client, comprising the steps of:

generating a profile of the file that includes identifying information for each component;

initiating a download sequence by which each component is transferred, one-by-one, from the server to the client using an Internet protocol;

when the download sequence is complete, reassembling the components into the file using the profile. *identifying information in the*

2.   The method as described in Claim 1 further including the step of:

upon interruption of the download sequence, restarting the download sequence with a component affected by the interruption.

3.   The method as described in Claim 2 wherein any component transferred prior to the interruption is not re-transferred from the server to the client.

4.   The method as described in Claim 1 wherein the Internet protocol is the File Transfer Protocol (FTP).

5.   The method as described in Claim 1 wherein the identifying information in the profile for each component

1 includes an identifier, a value indicating a size of the

2 component, and a code uniquely identifying the component.

1   6.   The method as described in Claim 5 wherein the

2 code is a cyclic redundancy code.

1   7.   The method as described in Claim 5 further

2 including the step of verifying that a component transferred

3 to the client is part of the file using the identifying

4 information.

1   8.   A method of downloading a file, consisting of a set

2 of components, from a internet server to an Internet client,

3 comprising the steps of:

4   breaking the file into the set of components;

5   generating a profile of the file that includes identifying

6 information for each component;

7   initiating a download sequence by which each

8 component is transferred, one-by-one, from the server to the

9 client using an Internet protocol;

10   responsive to any interruption of the download

11 sequence, restarting the download sequence with a

12 component affected by the interruption; and

13   when the download sequence is complete, reassembling

14 the components into the file using the profile. *identifying information in the*

1   9.   The method as described in Claim 8 wherein the

2 identifying information in the profile for each component

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1   includes an identifier, a value indicating a size of the
2   component, and a code uniquely identifying the component.

1   10.   The method as described in Claim 9 wherein the
2   code is a cyclic redundancy code.

1   11.   The method as described in Claim 9 further
2   including the step of verifying that a component transferred
3   to the client is part of the file using the identifying
4   information.

1   12.   A method of downloading a file, consisting of a set
2   of components, from a Internet server to an Internet client,
3   the file represented by a profile that includes identifying
4   information for the file and for each component thereof,
5   comprising the steps of:
6   initiating a download sequence according to the profile
7   by which each component is transferred, one-by-one, from the
8   server to the client using the Internet File Transfer Protocol
9   (FTP);
10   upon receipt at the client of a component, using the
11   identifying information to verify whether a complete version
12   of the component has been transferred;
13   if the complete version of the component has not been
14   transferred, restarting the download sequence with the
15   component; and
16   when the download sequence is complete, verifying
17   whether a complete version of the file has been transferred
18   using the identifying information for the file;
19   if the complete version of the file has been transferred,
20   reassembling the components into the file.

1   13.   The method as described in Claim 12 further
2   including the step of transferring the profile from the server
3   to the client prior to initiating the download sequence.

1   14.   The method as described in Claim 13 further
2   including the step of re-transferring the profile from the
3   server to the client prior to restarting the download sequence.

1   15.   The method as described in Claim 12 wherein the
2   identifying information for the file includes a code uniquely
3   identifying the file.

1   16.   The method as described in Claim 15 wherein the
2   code is a cyclic redundancy code.

1   17.   A   computer   program   product   for   use   in
2   downloading a file, consisting of a set of components, from a
3   Internet server to an Internet client, the computer program
4   product comprising:
5   a computer-readable storage medium having a substrate;
6   and
7   program   data   encoded   in   the   substrate   of   the
8   computer-readable storage medium, wherein the program
9   data comprises:
10   means for generating a profile that includes
11   identifying information for the file and for each
12   component thereof,
13   means for initiating a download sequence by which
14   each component is transferred, one-by-one, from the
15   server to the client using an Internet protocol;
16   means responsive to any interruption of the
17   download sequence, for restarting the download
18   sequence with the component affected by the
19   interruption; and

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1   means responsive to completion of the download
2   sequence for reassembling the components into the file
3   using the profile. *identifying information in the*

1   18.   The computer program product as described in
2   Claim 17 wherein the program data further includes means for
3   breaking the file into the set of components.

1   19.   The computer program product as described in
2   Claim 17 wherein the program data further includes means for
3   transferring the profile from the server to the client prior to
4   initiating the download sequence.

1   20.   The computer program product as described in
2   Claim 19 wherein the program data further includes means for
3   retransferring the profile from the server to the client prior to
4   restarting the download sequence.

1   21.   A   computer   program   product   for   use   in
2   downloading a file from a Internet server to an Internet client,
3   the computer program product comprising:
4   a computer-readable storage medium having a substrate;
5   and
6   program   data   encoded   in   the   substrate   of   the
7   computer-readable storage medium, wherein the program
8   data comprises:
9   means   for   breaking   the   file   into   a   set   of
10   components;
11   means   for   generating   a   profile   that   includes
12   identifying   information   for   the   file   and   for   each
13   component thereof,
14   means for transferring the profile from the server
15   to the client;
16   means   for   initiating   a   download   sequence
17   according to the profile by which each component is
18   transferred, one-by-one, from the server to the client
19   using an Internet protocol;
20   means   responsive   to   any   interruption   of   the
21   download sequence for retransferring the profile from
22   the server to the client and restarting the download
23   sequence   with   the   component   affected   by   the
24   interruption; and
25   means responsive to completion of the download
26   sequence for reassembling the components into the file
27   using the retransferred profile.

1   22.   A client computer connectable to the Internet,
2   comprising:
3   a processor;
4   an operating system;
5   Internet protocol means; and
6   a client component of a file transfer download routine,
7   the client component having an associated server component
8   supported on a server; wherein the client component of the
9   file transfer download routine includes means responsive to
10   receipt of component pieces of a file for reassembling
11   component pieces into the file using a file profile.

1   23.   The client computer as described in Claim 22
2   wherein the Internet protocol means is FTP.

1   24.   A server computer connectable to the Internet,
2   comprising:
3   a processor;
4   an operating system;
5   Internet protocol means; and
6   a server component of a file transfer download routine,
7   the server component having an associated client component
8   supported on a client machine; wherein the server component
9   includes means for initiating a download sequence by which
10 components of a file are transferred, one-by-one, from the
11 server computer to the client machine using the Internet
12 protocol means, and means responsive to any interruption of
13 the download sequence for restarting the sequence with the
14 component affected by the interruption.

1   25.   The client computer as described in Claim 24
2   wherein the Internet protocol means is FTP.

1   26.   A method of downloading a file from a Internet

2   server to an Internet client without action by a user of the

3   Internet client, comprising the steps of:

4   associating the file into a set of components;

5   generating a profile of the file that includes identifying

6   information for each component;

7   initiating a download sequence by which each

8   component is transferred, one-by-one, from the server to the

9   client using an Internet protocol;

10   when the download sequence is complete, reassembling

11   the components into the file using the profile. *identifying information in the*

1   27.   The method as described in Claim 26 wherein the

2   components are transferred in a sequential order as

3   determined by the profile.

1   28.   The method as described in Claim 26 wherein the

2   components are transferred in a non-sequential order.

1   29.   The method as described in Claim 26 wherein the

2   Internet client is a Web appliance.

1   30.   The method as described in Claim 23 wherein the

2   file is a updated version of a program running on the Web

3   appliance.

1   31.   A data processing system, comprising:

2   a remote control unit; and

3   a base unit connectable to a monitor for providing

4   Internet access under the control of the remote control unit,

5   the base unit comprising:

6   a processor;

7   Internet protocol means; and

8   a client component of a file transfer download

9   routine, the client component having an associated

10   server component supported on a server; wherein the

11   client component of the file transfer download routine

12   is run by the processor and includes means responsive to

13   receipt of component pieces of a file for reassembling

14   component pieces into the file using a file profile.